

Claims

- [c1] 1.A temperature sensitive display medium which is adapted to display a first image within a first temperature range and a second image within a second temperature range, wherein each image provides information about a product to which the display medium is attached.
- [c2] 2.The display medium of claim 1, further comprising at least two temperature sensitive zones, a first zone being adapted to display said first image, and a second zone being adapted to display said second image.
- [c3] 3.The display medium of claim 1, wherein said first and second images comprise barcodes.
- [c4] 4.The display medium of claim 1, wherein the temperature sensitive material comprises liquid crystals.
- [c5] 5.The display medium of claim 4, wherein a first blend of liquid crystals form said first image.
- [c6] 6.The display medium of claim 5, wherein said first blend reflects a colored light over said first temperature range, such that said first image is displayed over said first temperature range.
- [c7] 7.The display medium of claim 4, wherein a second blend of liquid crystals form said second image.
- [c8] 8.The display medium of claim 7, wherein said second blend reflects a colored light over said second temperature range such that said second image is displayed over said second temperature range.
- [c9] 9.The display medium of claim 1 further comprising:
a colored, light absorbent background material, said first and second images being displayed on said background material and wherein a part of said background material forms part of said first and second images.
- [c10] 10.The display medium of claim 1, wherein the temperature sensitive material comprises a thermochromic ink.

- [c11] 11.The display medium of claim 1, wherein the temperature sensitive material comprises one of a polymer and a liquid crystal polymer.
- [c12] 12.The display medium of claim 1, wherein the temperature sensitive material comprises a thermochromic dye.
- [c13] 13.The display medium of claim 12, wherein said image display process is not a reversible process.
- [c14] 14.The display medium of claim 2, wherein said first and second zones are adjacent to one another.
- [c15] 15.The display medium of claim 14, further comprising a transparent material covering said first and second zones.
- [c16] 16.The display medium of claim 2, wherein said second zone is on top of said first zone, said first and second zones being separated by a transparent material.
- [c17] 17.The display medium of claim 16, further comprising a transparent material covering said second image.
- [c18] 18.A display medium comprising:
at least one image; and
at least one identifier, wherein said at least one identifier is formed in a temperature sensitive material adapted to display said identifier over a first temperature range.
- [c19] 19.The display medium of claim 18, wherein said image provides a first information regarding a product to which it is attached, and said at least one identifier provides a second information regarding the product to which it is attached.
- [c20] 20.The display medium of claim 18, further comprising:
a second identifier formed in a temperature sensitive material, said second identifier adapted to be displayed over a second temperature range, and
wherein said second identifier provides a third information regarding the

product to which it is attached.

[c21] 21. An image reader comprising:
an integrated reader unit for reading at least one image providing a first information about a particular product to which said at least one image is attached, wherein said at least one image is associated with at least one identifier formed in a temperature sensitive material, wherein said identifier is adapted to be displayed over a first temperature range, said at least one identifier providing a second information about said product;
said reader unit reads said identifier when displayed;
a reference unit for referencing said first information or said first and said second information dependent upon whether said at least one image or said at least one image and said at least one identifier is read by the reader unit; and
a decision device for taking an appropriate action.

[c22] 22. The image reader of claim 21, wherein said decision device for taking an appropriate action comprises an alarm device for invoking a warning alarm.

[c23] 23. A method for creating a display medium comprising the steps of:
providing at least two temperature sensitive zones within said display medium, a first zone being adapted to display a first image within a first temperature range, and a second zone being adapted to display a second image within a second temperature range, wherein each image provides information about a product to which the display medium is attached.

[c24] 24. A method for creating a display medium comprising the steps of:
providing at least one image; and
forming at least one identifier in a temperature sensitive material, said at least one identifier being adapted to be displayed over a first temperature range.

[c25] 25. The method of claim 24, further comprising a second identifier, said second identifier being formed in a temperature sensitive material adapted to be displayed over a second temperature range.

[c26] 26. A system comprising an integrated image reader for reading one of at least two images attached to a product and formed in a temperature sensitive

material, a first image adapted to be displayed over a first temperature range, and a second image adapted to be displayed over a second temperature range, said system comprising:

a reading unit for reading a displayed image;

a storage device for storing a first information relating to said first image;

said storage device further stores second information relating to said second image;

an access unit for accessing one of said first information and said second information dependent upon whether said first or said second image is read by integrated image reader; and

an action taking unit for taking an appropriate action based on the information accessed.

[c27] 27.The system of claim 26, further comprising a cooking apparatus, wherein said appropriate action comprises programming said cooking apparatus with stored parameters.

[c28] 28.The system of claim 27, wherein said stored parameters comprise a cooking time and a heat setting.

[c29] 29.The system of claim 26, wherein said first information and said second information relates to stock level of the product to which said at least two images are attached.

[c30] 30.The system of claim 29, wherein one of said at least two images refers to a damaged product.

[c31] 31.The system of claim 29, wherein said action taking unit comprises a controller for invoking an alarm when one of said at least two images is read by said image reader.

[c32] 32.The system of claim 26, further comprising a refrigeration apparatus, wherein said appropriate action comprises, responsive to said first image being displayed, sounding an alarm to indicate that the product to which said first image is attached should not be placed therein.

[c33] 33.The system of claim 26, further comprising a freezing apparatus, wherein said appropriate action comprises, responsive to said first image being displayed, lowering the temperature within at least a part of said apparatus for a predetermined amount of time.

[c34] 34.A system comprising an integrated image reader for reading at least one image attached to a product, wherein said at least one image is associated with at least one identifier, said at least one identifier being formed in a temperature sensitive material adapted to display said at least one identifier over a first temperature range, said system comprising:
an integrated image reader for reading said at least one image;
said reader is used for reading said at least one identifier when displayed;
a storage device for storing a first information relating to said at least one image;
a storage device for storing a second information relating to said at least one identifier;
an access unit for accessing one of said first information or said first information and said second information dependent upon whether said at least one image or said at least one image and said at least one identifier is read by integrated image reader; and
an action taking unit for taking an appropriate action based on said information accessed.

[c35] 35.The system of claim 34 further comprising:
a second identifier associated with said at least one image and formed in a temperature sensitive material adapted to be displayed over a second temperature range;
said reader for reading said second identifier when displayed;
a storage device for storing a third information relating to said second identifier;
said access unit is used for accessing said third information when said first image and said associated second identifier is read.